# RESIDENTIAL AND NON-RESIDENTIAL BUILDING ENERGY SCIENCE TECHNICAL SUPPORT

California Energy Commission

Request for Qualifications

RFQ #400-10-402 and #400-10-403

Pre-Bid Conference

March 24, 2011

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# RFQ Pre-bid Conference Agenda

- Welcome & CEC staff introductions

- Purpose of RFQs

- RFQ Administrative Requirements

- Administrative Q&As

- Overview of 400-10-402 Scope of Work

- 402 SOW Q&As

- Overview of 400-10-403 Scope of Work

- 403 SOW Q&As

- SOQ Evaluation Criteria

- Additional Q&As

- Adjourn

# Purpose of these RFQs

- Solicit for building energy science architectural and engineering professional support services

- Specific focus on building energy modeling, performance standards rule set development and rules processing software

RFQ Pre-bid Conference – March 24, 2011

# Statement of Qualifications Requirements

- STATEMENT OF QUALIFICATIONS

- Consists of Two Volumes

- VOLUME 1 - Administrative Response

- VOLUME 2 - Technical Response

# Volume 1, Administrative Response

Every Proposer must complete and include the following forms in Volume 1.

- Cover Letter

- Table of Contents

- Contractor Status Form, Attachment 1

- Darfur Contracting Act Form, Attachment 2

- DVBE Form, Attachment 3.3

- Bidder Declaration Form, Attachment 3.4

- Signed Certification Clauses, Attachment 4

# Volume 2, Technical Response

Every Proposer must complete and include the following in Volume 2.

- Approach to Tasks in Scope of Work
- Contractor Qualifications
- Cost Minimization
- Project Team Organization Structure
- Project Team Relevant Experience and Qualifications
- Customer References, Attachment 5

# Disabled Veteran Business Enterprise (DVBE) Requirements

Full DVBE participation (3% of total Agreement amount)

Proposer commits to meet or exceed the DVBE participation requirements by either of the following methods:

Method A1 – Proposer is a Certified DVBE

Method A2 – Subcontractor is a certified DVBE and will receive at least 3% of the Agreement amount

# DVBE (cont'd)

A copy of an Agreement between the Contractor and the DVBE must be submitted prior to contract award. The Agreement may be in draft form but must show that the DVBE meets the <u>Commercially Useful Function</u> requirements as defined in the RFQ.

# Tentative Key Activities and Dates

Deadline for Written Questions - March 24, 2011

Distribute Questions/Answers and Addenda (if any) to RFQ - April 1, 2011

**Deadline to Submit Statement of Qualifications by 3:00 p.m. - April 18, 2011**

Notice of Selection – April 27, 2011

Commission Business Meeting – June 15, 2011

# Questions and Answers

ADMINISTRATIVE
Question and Answer Session

# RFQ **400-10-402** Residential Building Energy Science

# Program Overview
## Residential Building Energy Science

- Design, specification and development of building energy analysis tools needed to support the implementation of the Standards

- Collaboratively develop, test, document, and support open source building energy modeling software and other building energy analysis tools used for Standards development, compliance, & clean energy incentive programs

# Scope of Work

400-10-402

## Task 1: Contract Management

## Task 2, 3: Program Advisory Committee

- Clean energy policy decision makers & fund managers

- Building energy science experts & software product developers

- Building design & construction industry representatives

- Open source software developers & managers

# Scope of Work

**400-10-402**

## Task 4: Administer Software Development and Distribution

- Recommend open source software license agreement

- Manage software development, documentation, maintenance & host services

- Establish & implement software QC & test procedures

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# **Scope of Work** 400-10-402

## Task 5: 2013 Residential ACM Reference Method

- Implement the Performance Standards requirements (rules) for modeling the standard and proposed building designs

- Implement rule set as a separate software layer

- Develop a user interface sufficient for software testing & to produce reference results

# **Scope of Work**

**400-10-402**

## Task 6: Computer Generated Standards Compliance Forms

- Develop web-based software to generate & populate Standards compliance forms

- Develop compliance form generation software module for use in Standards compliance software

# Scope of Work

**400-10-402**

## Task 7: Residential Standards Compliance Engine

- Develop software using Task 5 Reference Method software & Task 6 Compliance Forms module with API for use by 3rd party compliance software vendors

- Develop software necessary to test the functionality of the Compliance Engine software module

# **Scope of Work**

**400-10-402**

## Task 8: Compliance Engine Pilots in BEM Software

- Pilot the use of the 2013 Residential Standards Compliance Engine in BEM tools used by the residential building design industry

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# Scope of Work

**400-10-402**

# Task 9: Residential Standards Compliance Software

- Develop publicly available Compliance Software provided by the CEC for the 2013 Residential Standards

- Software product will meet the minimum requirements of the Residential ACM Approval Manual as 2013 Residential Compliance Software

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# **Scope of Work**

**400-10-402**

## Task 10: Residential Standards Simple Compliance Tool

- Develop Standards compliance software for design projects with limited scope (e.g. envelope only compliance) and/or additions & alterations

- Use of defaults etc. to allow simpler data entry when limited building features are subject to Title 24, Part 6 design requirements

# **Scope of Work** 400-10-402

# Task 11: Photovoltaic Model & Software Development

- CECPV model validation & improvements
- Develop web service or other user interface for CECPV simulation model

# Task 12: California Utility Allowance Calculator

- Software maintenance, support, updates as needed

# **Scope of Work**

**400-10-402**

# Task 13: Standards Compliance Data Repository

- Establish an electronic database of Standards compliance project results for CEC compliance inquiry & enforcement

# Task 14: Contingencies & Additional Topic Areas

- Unanticipated residential building energy science technical support consistent with SOW objectives

# Questions and Answers

400-10-402
Scope of Work
Question and Answer Session

# RFQ  **400-10-403**
# Nonresidential Building Energy Science

# Program Overview
## Nonresidential Building Energy Science

- Design, specification and development of building energy analysis tools needed to support the implementation of the Standards

- Collaboratively develop, test, document, and support open source building energy modeling & other software used for Standards development & compliance

# Scope of Work

**400-10-403**

## Task 7: 2013 Nonresidential Standards Ruleset

- Review the Standards data dictionary terms, databases, logical operators and baseline building energy system models in draft Nonresidential Standards ACM Ruleset (currently under development)

- Update and enhance the draft ruleset as needed to implement the 2013 Nonresidential Performance Standards

# Scope of Work

**400-10-403**

## Task 1: Contract Management

## Task 2, 3: Program Advisory Committee

- Clean energy policy decision makers & fund managers

- Building energy science experts & software product developers

- Building design & construction industry representatives

- Open source software developers & managers

# Scope of Work

**400-10-403**

# Task 4: Administer Software Development and Distribution

- Recommend open source software license agreement

- Manage software development, documentation, maintenance & host services

- Establish & implement software QC & test procedures

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# **Scope of Work**

400-10-403

## Task 5: 2013 Nonresidential ACM Reference Method

- Develop a set of nonresidential building energy modeling results and reference data

- This Reference Method will be what all ACM computer programs will be compared to in CEC compliance software certification process

# Scope of Work

**400-10-403**

## Task 6: Computer Generated Nonresidential Standards Compliance Forms

- Leverage work to be completed in 400-10-402

- Develop nonresidential compliance form generation software module for use in Standards compliance software

# Scope of Work

**400-10-403**

## Task 8: 2013 Nonresidential Standards Compliance Engine

- Develop rules processing software to implement the 2013 Nonresidential Standards ACM Ruleset & NREL's OpenStudio API to generate EnergyPlus simulations of the standard and proposed designs

- Integrate the Task 6 Compliance Forms software module

- Build a software API/plugin that can be integrated into 3rd party compliance software

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# **Scope of Work**

400-10-403

## Task 9: Ruleset & Compliance Engine Pilots in BEM Software

- Pilot the use of the 2013 Nonresidential Standards Ruleset in BEM tools used by the nonresidential building design industry

- Pilot the use of the 2013 Nonresidential Standards Compliance Engine in BEM tools used by the nonresidential building design industry

# Scope of Work

**400-10-403**

## Task 10: 2013 Nonresidential Standards Compliance Software

- Develop publicly available Compliance Software provided by the CEC for the 2013 Nonresidential Standards

- Software product will meet the minimum requirements of the Nonresidential ACM Approval Manual as 2013 Nonresidential Compliance Software

# **Scope of Work**  400-10-403

## Task 11: Contingencies & Additional Topic Areas

- Unanticipated nonresidential building energy science technical support consistent with SOW objectives

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# Questions and Answers

400-10-403
Scope of Work
Question and Answer Session

# SOQ Evaluation Criteria

Company / Team Organization          20%

Experience and Qualifications        35%

Approach to Scope of Work
and Methodology                      35%

Customer References                  5%

SOQ Discussions                      5%

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# **Questions and Answers**

FINAL
Question and Answer Session

# Whom to Contact?

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